

Application No.: 10/769,578
Response dated: December 28, 2006
Reply to Office Action dated: October 2, 2006

Amendments to the Specification:

Please replace paragraph [00029] with the following amended paragraph:

[00029] FIGS. 5 A-B show titration or competitive displacement curves for uridine nucleotides using a polyclonal antibody raised against UDP/UTP and a commercially available tracer molecule (~~Alexa-UTP~~) (ALEXATM-UTP (a fluorescent dye synthesized through sulfonation of amino-coumarin or rhodamine and produced by Invitrogen, Carlsbad, CA)).

Please replace paragraph [00060] with the following amended paragraph:

[00060] The term “detectable tag ” as used herein refers to a fluorescent or chemiluminescent tracer, which is conjugated to a donor product. Fluorescence is the preferred mode of detection for the invention. A suitable detectable tag may be produced by conjugating for example, a chemiluminescent tag or a fluorophore tag, to the donor product molecule in such a way that it does not interfere significantly with antibody binding (i.e., most likely attached via the adenine portion of the nucleotide). Fluorophores applicable to the methods of the present invention include but are not limited to fluorescein, rhodamine, ~~BODIPY~~ BODIPYTM (DIPYromethene BOron Difluoride), Texas Red, and derivative thereof known in the art. Rhodamine conjugates and other red conjugates may be synthesized and optimized as detectable tags because their higher wavelength emission is less subject to interference from autofluorescence than the green of fluorescein.

Application No.: 10/769,578
Response dated: December 28, 2006
Reply to Office Action dated: October 2, 2006

Please replace paragraph [000130] with the following amended paragraph:

[000130] Rabbit antiserum raised against a mixture of UTP and UDP conjugated to BSA and a commercially available tracer molecule, a fluorescently labeled UTP compound (~~Alexa-UTP~~ ALEXATM-UTP, Molecular Probes) was added to wells of a black multiwell plate (Thermo Labsystems Pt#7605) containing the indicated amounts of uridine nucleotides. ~~Alexa-UTP~~ ALEXATM-UTP was used as a tracer for the FPIA experiments. Fluorescence polarization was read in a Tecan Ultra plate reader after several hours of equilibration. Reaction conditions were as follows: 50 mM KPO₄ pH 7.4, 150 mM NaCl, 0.1 mg/ml BGG, 1 nM ChromaTide ~~Alexa~~ ALEXATM Fluor 488-5-UTP, 1.25 ul rabbit sera, 100l total volume.

Please replace paragraph [000131] with the following amended paragraph:

[000131] The experimental results from the UGT reaction are provided in Figures 8A-B. Figure 8 shows titrations of antibody-tracer complex with various uridine nucleotides using the first polyclonal antibody raised against UDP/UTP and a commercially available tracer molecule (~~Alexa-UTP~~) (ALEXATM-UTP). It is noted that the two graphs differ in the scale of the X-axis and that competition by UDP, the donor product is half maximal at approximately 10 μ M, whereas for UDPGA, the donor, half maximal displacement is higher than 1mM which is at least a 100x difference in selectivity.